

## EAST Search History

| Ref # | Hits | Search Query                                                                                              | DBs                                       | Default Operator | Plurals | Time Stamp          |
|-------|------|-----------------------------------------------------------------------------------------------------------|-------------------------------------------|------------------|---------|---------------------|
| L1    | 707  | "704".clas. and (center adj frequenc\$4)                                                                  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | OR               | OFF     | 2009/04/10<br>14:37 |
| L2    | 37   | "704".clas. and ((center adj frequenc \$4) near5 (sub-band\$1 subband))                                   | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | OR               | OFF     | 2009/04/10<br>14:37 |
| L3    | 1    | "704".clas. and ((center adj frequenc \$4) near5 (sub-band\$1 subband)) and (detect \$4 near5 formant\$1) | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | OR               | OFF     | 2009/04/10<br>14:38 |
| L4    | 5    | "704".clas. and ((center adj frequenc \$4) near5 (sub-band\$1 subband)) and (formant \$1)                 | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | OR               | OFF     | 2009/04/10<br>14:38 |
| L5    | 1    | "2002015041".pn.                                                                                          | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | OR               | OFF     | 2009/04/10<br>15:13 |
| L6    | 1    | "20020015041".pn.                                                                                         | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | OR               | OFF     | 2009/04/10<br>15:13 |
| L7    | 1    | "20020154041".pn.                                                                                         | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | OR               | OFF     | 2009/04/10<br>15:13 |
| L8    | 1    | "20020154041".pn. and (correction)                                                                        | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | OR               | OFF     | 2009/04/10<br>15:15 |
| L9    | 3    | "704".clas. and ((center adj frequenc \$4) near5 (correction))                                            | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | OR               | OFF     | 2009/04/10<br>15:28 |
| L10   | 5    | "704".clas. and ((center adj frequenc \$4) with (correction))                                             | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | OR               | OFF     | 2009/04/10<br>15:44 |

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| L11 | 45    | "704".clas. and<br>((center adj frequenc<br>\$4) with modulat\$4)                                                                                                       | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | OR | OFF | 2009/04/10<br>15:44 |
| L12 | 7     | "704".clas. and<br>((center adj frequenc<br>\$4) with correct\$4)                                                                                                       | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | OR | OFF | 2009/04/10<br>15:52 |
| L13 | 43    | "704".clas. and<br>((center adj frequenc<br>\$4) with adjust\$4)                                                                                                        | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | OR | OFF | 2009/04/10<br>15:52 |
| L14 | 34    | "704".clas. and<br>((center adj frequenc<br>\$4) with factor\$1)                                                                                                        | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | OR | OFF | 2009/04/10<br>16:02 |
| L15 | 3     | "704".clas. and<br>((center adj frequenc<br>\$4) near5 (sub-band\$1<br>subband\$1 filter-bank<br>\$1 filterbank\$1)) and<br>(correction adj factor<br>\$1)              | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | OR | OFF | 2009/04/10<br>16:06 |
| L16 | 10    | "704".clas. and<br>((center adj frequenc<br>\$4) near5 (sub-band\$1<br>subband\$1 filter-bank<br>\$1 filterbank\$1)) and<br>(correct\$4 with<br>(amplitude\$1 gain\$1)) | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | OR | OFF | 2009/04/10<br>16:07 |
| L17 | 1     | "20020154041".pn.<br>and (spectr\$2)                                                                                                                                    | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | OR | OFF | 2009/04/10<br>16:08 |
| L18 | 30523 | correction adj factor\$1                                                                                                                                                | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | OR | OFF | 2009/04/10<br>16:12 |
| L19 | 0     | ((correction adj factor<br>\$1) with formant\$1)<br>and ((center radial<br>radian) adj frequenc<br>\$4) and "704".clas.                                                 | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | OR | OFF | 2009/04/10<br>16:12 |
| L20 | 203   | (formant\$1) and<br>((center radial radian)<br>adj frequenc\$4) and<br>"704".clas.                                                                                      | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | OR | OFF | 2009/04/10<br>16:13 |

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| L21 | 26  | ((formant\$1) and (((center radial radian) adj frequenc\$4) same modulatt\$4)and "704". clas.      | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | OFF | 2009/04/10 16:13 |
| L22 | 10  | ((formant\$1) and (((center radial radian) adj frequenc\$4) with multipl\$4)and "704". clas.       | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | OFF | 2009/04/10 16:15 |
| L23 | 10  | ((((center radial radian) adj frequenc\$4) with (multiply multiplied multiplying))and "704". clas. | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | OFF | 2009/04/10 16:16 |
| L24 | 24  | ((determin\$4 with formant\$1 with factor \$1)and "704".clas.                                      | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | OFF | 2009/04/10 16:19 |
| L25 | 1   | ((masanao and suzuki). in. and fujitsu.as. and (amplitude adj factor \$1)                          | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | OFF | 2009/04/10 16:25 |
| L26 | 0   | ("7152032").URPN.                                                                                  | USPAT                            | OR | OFF | 2009/04/10 16:25 |
| L27 | 2   | ((masanao and suzuki). in. and (amplitude adj factor\$1)                                           | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | OFF | 2009/04/10 16:31 |
| L28 | 52  | "704".clas. and (amplitude adj factor \$1)                                                         | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | OFF | 2009/04/10 16:41 |
| L29 | 492 | "704".clas. and ((subband\$1 sub-band \$1) near5 (gain\$1 factor\$1))                              | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | OFF | 2009/04/10 16:55 |
| L30 | 3   | "704".clas. and (((subband\$1 sub-band \$1) near5 (gain\$1 factor\$1)) same formant\$1)            | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | OFF | 2009/04/10 16:55 |
| L31 | 183 | "704".clas. and (calculat\$4 with modulatt\$4)                                                     | US-PGPUB; USPAT; USOCR; EPO; JPO | OR | OFF | 2009/04/10 17:05 |

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| L32 | 3   | "704".clas. and<br>((calculat\$4 with<br>modulat\$4) same<br>((target reference) adj<br>(signal\$1 level\$1))) | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | OR | OFF | 2009/04/10<br>17:05 |
| L33 | 1   | 10/806662                                                                                                      | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | OR | OFF | 2009/04/10<br>17:06 |
| L34 | 3   | "704".clas. and<br>kikumoto.in.                                                                                | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | OR | OFF | 2009/04/10<br>17:07 |
| L35 | 2   | "704".clas. and<br>kikumoto.in. and<br>center                                                                  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | OR | OFF | 2009/04/10<br>17:07 |
| L36 | 23  | "704".clas. and (voice<br>and modulat\$4).ti.                                                                  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | OR | OFF | 2009/04/10<br>17:13 |
| L37 | 13  | (voice adj chang\$4)<br>and (sub-band\$1<br>subband\$1)                                                        | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | OR | OFF | 2009/04/10<br>17:49 |
| L38 | 252 | (voice near5 chang\$4)<br>and (sub-band\$1<br>subband\$1)                                                      | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | OR | OFF | 2009/04/10<br>17:53 |
| L39 | 8   | (voice near5 chang\$4)<br>with (sub-band\$1<br>subband\$1)                                                     | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | OR | OFF | 2009/04/10<br>17:56 |
| L40 | 2   | (voice near5 alter\$4)<br>same (sub-band\$1<br>subband\$1)                                                     | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | OR | OFF | 2009/04/10<br>17:57 |
| L41 | 27  | (voice near5 alter\$4)<br>and (sub-band\$1<br>subband\$1)                                                      | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | OR | OFF | 2009/04/10<br>17:57 |
| L42 | 0   | 10/191409 and filter\$                                                                                         | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | OR | OFF | 2009/04/10<br>18:01 |

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| L43 | 24  | "704".clas. and ((voice with modulat\$4) same (sub-band\$1 subband \$1))                                                                                                                | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | OR | OFF | 2009/04/10<br>18:02 |
| L44 | 69  | ("704".clas. and ((voice with modulat \$4) and (sub-band\$1 subband\$1))) not L43                                                                                                       | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | OR | OFF | 2009/04/10<br>18:03 |
| L45 | 8   | ("704".clas. and ((voice with modulat \$4) and (sub-band\$1 subband\$1)) and (center adj frequenc \$4)) not L43                                                                         | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | OR | OFF | 2009/04/10<br>18:03 |
| L46 | 12  | ("704".clas. and ((voice with modulat \$4) and (sub-band\$1 subband\$1)) and (center adj frequenc \$4))                                                                                 | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | OR | OFF | 2009/04/10<br>18:06 |
| L47 | 26  | "704".clas. and ((subband\$1 sub-band \$1) with (center adj frequenc\$4)) and modulat\$4                                                                                                | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | OR | OFF | 2009/04/10<br>18:09 |
| L48 | 162 | "704".clas. and (voice near5 robot)                                                                                                                                                     | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | OR | OFF | 2009/04/10<br>18:14 |
| L49 | 59  | "704".clas. and (voice near5 robot) and ((alter \$4 chang\$4) with voice)                                                                                                               | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | OR | OFF | 2009/04/10<br>18:14 |
| L50 | 2   | 10/191409                                                                                                                                                                               | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | OR | OFF | 2009/04/10<br>18:15 |
| L51 | 0   | ("7401021").URPN.                                                                                                                                                                       | USPAT                                     | OR | OFF | 2009/04/10<br>18:15 |
| L52 | 13  | ("4100374"  <br>"5113449"   "5327521"<br>  "5758320"  <br>"5765134"   "5860064"<br>  "5889223"  <br>"5933808"   "5963907"<br>  "6148175"  <br>"6229897"   "6987514"<br>  "7016841").PN. | US-PGPUB;<br>USPAT;<br>USOCR              | OR | OFF | 2009/04/10<br>18:15 |

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| L53 | 0   | ("4100374"  <br>"5113449"   "5327521"<br>  "5758320"  <br>"5765134"   "5860064"<br>  "5889223"  <br>"5933808"   "5963907"<br>  "6148175"  <br>"6229897"   "6987514"<br>  "7016841").PN. and<br>(filterbank\$1) | US-PGPUB;<br>USPAT;<br>USOCR | OR | OFF | 2009/04/10<br>18:16 |
| L54 | 9   | ("4100374"  <br>"5113449"   "5327521"<br>  "5758320"  <br>"5765134"   "5860064"<br>  "5889223"  <br>"5933808"   "5963907"<br>  "6148175"  <br>"6229897"   "6987514"<br>  "7016841").PN. and<br>(filter\$1)     | US-PGPUB;<br>USPAT;<br>USOCR | OR | OFF | 2009/04/10<br>18:16 |
| L55 | 0   | ("4100374"  <br>"5113449"   "5327521"<br>  "5758320"  <br>"5765134"   "5860064"<br>  "5889223"  <br>"5933808"   "5963907"<br>  "6148175"  <br>"6229897"   "6987514"<br>  "7016841").PN. and<br>(sub-band\$1)   | US-PGPUB;<br>USPAT;<br>USOCR | OR | OFF | 2009/04/10<br>18:16 |
| L56 | 0   | ("4100374"  <br>"5113449"   "5327521"<br>  "5758320"  <br>"5765134"   "5860064"<br>  "5889223"  <br>"5933808"   "5963907"<br>  "6148175"  <br>"6229897"   "6987514"<br>  "7016841").PN. and<br>(subband\$1)    | US-PGPUB;<br>USPAT;<br>USOCR | OR | OFF | 2009/04/10<br>18:16 |
| L57 | 211 | (transform\$4 with<br>voice) and (sub-band<br>\$1 subband\$1)                                                                                                                                                  | US-PGPUB;<br>USPAT;<br>USOCR | OR | OFF | 2009/04/10<br>18:22 |
| L58 | 17  | (transform\$4 with<br>voice) and (sub-band<br>\$1 subband\$1) and<br>(center adj frequenc<br>\$4)                                                                                                              | US-PGPUB;<br>USPAT;<br>USOCR | OR | OFF | 2009/04/10<br>18:22 |

|     |      |                                                                                                           |                        |    |     |                  |
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| L59 | 17   | (transformation\$1 with voice) and (sub-band \$1 subband\$1) and (center adj frequenc \$4)                | US-PGPUB; USPAT; USOCR | OR | OFF | 2009/04/10 18:24 |
| L60 | 108  | (convert\$4 with voice) and (sub-band\$1 subband\$1) and (center adj frequenc \$4)                        | US-PGPUB; USPAT; USOCR | OR | OFF | 2009/04/10 18:25 |
| L61 | 0    | (convert\$4 with voice) and (sub-band\$1 subband\$1) and (center adj frequenc \$4) and (target adj voice) | US-PGPUB; USPAT; USOCR | OR | OFF | 2009/04/10 18:25 |
| L62 | 140  | "704".clas. and (target adj voice)                                                                        | US-PGPUB; USPAT; USOCR | OR | OFF | 2009/04/10 18:25 |
| L63 | 13   | "704".clas. and (target adj voice) and (subband\$1 sub-band \$1)                                          | US-PGPUB; USPAT; USOCR | OR | OFF | 2009/04/10 18:26 |
| L64 | 14   | (target adj voice) and (subband\$1 sub-band \$1)                                                          | US-PGPUB; USPAT; USOCR | OR | OFF | 2009/04/10 18:26 |
| L65 | 1    | (target adj voice) and (filterbank\$1 filter-bank \$1)                                                    | US-PGPUB; USPAT; USOCR | OR | OFF | 2009/04/10 18:27 |
| L66 | 1191 | ((alter\$4 chang\$4 adjust\$4 modif\$4) with pitch with voice)                                            | US-PGPUB; USPAT; USOCR | OR | OFF | 2009/04/10 18:29 |
| L67 | 6    | ((alter\$4 chang\$4 adjust\$4 modif\$4) with pitch with voice) and (filterbank\$1 filter-bank \$1)        | US-PGPUB; USPAT; USOCR | OR | OFF | 2009/04/10 18:29 |
| L68 | 37   | ((alter\$4 chang\$4 adjust\$4 modif\$4) with pitch with voice) and (sub-band\$1)                          | US-PGPUB; USPAT; USOCR | OR | OFF | 2009/04/10 18:30 |

|     |    |                                                                                                                                                                                                                     |                              |    |     |                     |
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| L69 | 0  | ("20040054524"  <br>"4591928"   "5301259"<br>  "5327521"  <br>"5749073"   "5750912"<br>  "5966687"  <br>"5998725"   "6182042"<br>  "6336092"  <br>"6463412"   "6629067"<br>  "6836761").PN. and<br>(sub-band\$1)    | US-PGPUB;<br>USPAT;<br>USOCR | OR | OFF | 2009/04/10<br>18:31 |
| L70 | 0  | ("20040054524"  <br>"4591928"   "5301259"<br>  "5327521"  <br>"5749073"   "5750912"<br>  "5966687"  <br>"5998725"   "6182042"<br>  "6336092"  <br>"6463412"   "6629067"<br>  "6836761").PN. and<br>(subband\$1)     | US-PGPUB;<br>USPAT;<br>USOCR | OR | OFF | 2009/04/10<br>18:31 |
| L71 | 1  | ("20040054524"  <br>"4591928"   "5301259"<br>  "5327521"  <br>"5749073"   "5750912"<br>  "5966687"  <br>"5998725"   "6182042"<br>  "6336092"  <br>"6463412"   "6629067"<br>  "6836761").PN. and<br>(filterbank\$1)  | US-PGPUB;<br>USPAT;<br>USOCR | OR | OFF | 2009/04/10<br>18:31 |
| L72 | 0  | ("20040054524"  <br>"4591928"   "5301259"<br>  "5327521"  <br>"5749073"   "5750912"<br>  "5966687"  <br>"5998725"   "6182042"<br>  "6336092"  <br>"6463412"   "6629067"<br>  "6836761").PN. and<br>(filter-bank\$1) | US-PGPUB;<br>USPAT;<br>USOCR | OR | OFF | 2009/04/10<br>18:32 |
| L73 | 13 | ("20040054524"  <br>"4591928"   "5301259"<br>  "5327521"  <br>"5749073"   "5750912"<br>  "5966687"  <br>"5998725"   "6182042"<br>  "6336092"  <br>"6463412"   "6629067"<br>  "6836761").PN.                         | US-PGPUB;<br>USPAT;<br>USOCR | OR | OFF | 2009/04/10<br>18:33 |



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|-----|---|---------------------------------------|------------------------------|----|-----|---------------------|
| L74 | 0 | "6336092".pn. and<br>band-pass        | US-PGPUB;<br>USPAT;<br>USOCR | OR | OFF | 2009/04/10<br>18:40 |
| L75 | 1 | "6336092".pn. and<br>band             | US-PGPUB;<br>USPAT;<br>USOCR | OR | OFF | 2009/04/10<br>18:40 |
| L76 | 1 | "6336092".pn. and<br>band\$1          | US-PGPUB;<br>USPAT;<br>USOCR | OR | OFF | 2009/04/10<br>18:40 |
| L77 | 2 | 10/191409 and pitch                   | US-PGPUB;<br>USPAT;<br>USOCR | OR | OFF | 2009/04/10<br>19:27 |
| L78 | 1 | 10/806662 and<br>("musical interval") | US-PGPUB;<br>USPAT;<br>USOCR | OR | OFF | 2009/04/10<br>19:50 |

**4/10/2009 8:13:23 PM**